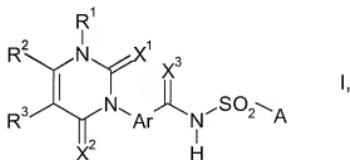


Amendments to the Claims:

1. (Currently Amended) A process for preparing a 3-phenyl(thio)uracil or 3-phenyldithiouracil compound of formula I



where the variables are each defined as follows:

R<sup>1</sup> is hydrogen, cyano, amino, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>3</sub>-cyanoalkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkoxy, C<sub>3</sub>-C<sub>7</sub>-cycloalkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-haloalkenyl, C<sub>3</sub>-C<sub>6</sub>-alkynyl, C<sub>3</sub>-C<sub>6</sub>-haloalkynyl or phenyl-C<sub>1</sub>-C<sub>4</sub>-alkyl;

R<sup>2</sup> and R<sup>3</sup> are each independently hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl, C<sub>3</sub>-C<sub>7</sub>-cycloalkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-haloalkenyl, C<sub>3</sub>-C<sub>6</sub>-alkynyl or C<sub>3</sub>-C<sub>6</sub>-haloalkynyl;

X<sup>1</sup>, X<sup>2</sup> and X<sup>3</sup> are each independently oxygen or sulfur;

Ar is phenyl, which may be mono- or polysubstituted by the following groups: hydrogen, halogen, cyano, C<sub>1</sub>-C<sub>4</sub>-alkyl or C<sub>1</sub>-C<sub>4</sub>-haloalkyl; and

A is a radical derived from a primary or secondary amine or NH<sub>2</sub> is -NR<sup>5</sup>R<sup>6</sup>  
where the variables R<sup>5</sup> and R<sup>6</sup> are each defined as follows:

R<sup>5</sup> and R<sup>6</sup> are each independently  
hydrogen, C<sub>1</sub>-C<sub>10</sub>-alkyl, C<sub>2</sub>-C<sub>10</sub>-alkenyl or C<sub>2</sub>-C<sub>10</sub>-alkynyl, each of which  
may be unsubstituted or substituted by one of the following radicals:  
C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-alkylthio, CN, NO<sub>2</sub>, formyl, C<sub>1</sub>-C<sub>4</sub>-  
alkylcarbonyl, C<sub>1</sub>-C<sub>4</sub>-alkoxycarbonyl, C<sub>1</sub>-C<sub>3</sub>-alkylaminocarbonyl,

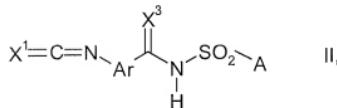
C<sub>1</sub>-C<sub>4</sub>-dialkylaminocarbonyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfonyl, C<sub>3</sub>-C<sub>10</sub>-cycloalkyl, 3- to 8-membered heterocyclyl having from one to three heteroatoms selected from O, S, N and an NR<sup>7</sup> group

where R<sup>7</sup> is hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>6</sub>-alkenyl or C<sub>3</sub>-C<sub>6</sub>-alkynyl, phenyl which may itself have 1, 2, 3 or 4 substituents selected from halogen, C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-fluoroalkyl, C<sub>1</sub>-C<sub>4</sub>-alkyloxycarbonyl, trifluoromethylsulfonyl, C<sub>1</sub>-C<sub>3</sub>-alkylamino, C<sub>1</sub>-C<sub>3</sub>-dialkylamino, formyl, nitro or cyano; C<sub>3</sub>-C<sub>10</sub>-haloalkyl, C<sub>2</sub>-C<sub>10</sub>-haloalkenyl, C<sub>2</sub>-C<sub>10</sub>-haloalkynyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, C<sub>3</sub>-C<sub>10</sub>-cycloalkenyl, 3- to 8-membered heterocyclyl having from one to three heteroatoms selected from O, S, N and an NR<sup>7</sup> group where R<sup>7</sup> is hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>6</sub>-alkenyl or C<sub>3</sub>-C<sub>6</sub>-alkynyl, phenyl or naphthyl,

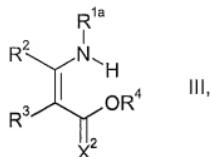
where C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, C<sub>3</sub>-C<sub>10</sub>-cycloalkenyl, 3- to 8-membered heterocyclyl, phenyl or naphthyl, each may themselves have 1, 2, 3 or 4 substituents selected from halogen, C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-fluoroalkyl, C<sub>1</sub>-C<sub>4</sub>-alkyloxycarbonyl, trifluoromethylsulfonyl, formyl, C<sub>1</sub>-C<sub>3</sub>-alkylamino, C<sub>1</sub>-C<sub>3</sub>-dialkylamino, phenoxy, nitro or cyano; or

R<sup>5</sup> and R<sup>6</sup> together form a saturated or partially unsaturated 5- to 8-membered nitrogen heterocycle which may have, as ring members, one or two carbonyl groups, thiocarbonyl groups and/or one or two further heteroatoms selected from O, S, N and an NR<sup>7</sup> group  
where R<sup>7</sup> is hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>6</sub>-alkenyl or C<sub>3</sub>-C<sub>6</sub>-alkynyl, and which may be substituted  
by C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy and/or C<sub>1</sub>-C<sub>4</sub>-haloalkyl;

comprising reacting a phenyl iso(thio)cyanate of the formula II



where the variables  $X^1$ ,  $X^3$ , Ar and A are each as defined above, with an enamine of the general formula III



where

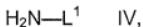
$\text{R}^{1a}$  is as defined above for  $\text{R}^1$  with the exception of amino;

$\text{R}^2$ ,  $\text{R}^3$  and  $X^2$  are each as defined above; and

$\text{R}^4$  is  $\text{C}_1\text{-C}_6$ -alkyl,  $\text{C}_1\text{-C}_6$ -haloalkyl,  $\text{C}_1\text{-C}_3$ -alkoxy- $\text{C}_1\text{-C}_3$ -alkyl,  $\text{C}_1\text{-C}_3$ -alkylthio- $\text{C}_1\text{-C}_3$ -alkyl,  $\text{C}_2\text{-C}_6$ -alkenyl,  $\text{C}_2\text{-C}_6$ -haloalkenyl,  $\text{C}_3\text{-C}_6$ -alkynyl,  $\text{C}_3\text{-C}_6$ -haloalkynyl,  $\text{C}_3\text{-C}_7$ -cycloalkyl,  $\text{C}_1\text{-C}_6$ -cyanoalkyl or benzyl which is itself unsubstituted or substituted on the phenyl ring by methyl, methoxy, methylthio, halogen, nitro or cyano;

in the presence of from 1.8 to 2.6 base equivalents per mole of the phenyl iso(thio)cyanate of the formula II;

and, if appropriate, in a further step, reacting the resulting 3-phenyl(thio)uracil or 3-phenyldithiouracil of the formula I where  $\text{R}^1=\text{R}^{1a}$ , where  $\text{R}^1$  is hydrogen, with an aminating agent of the formula IV



where  $L^1$  is a nucleophilic leaving group

to give a 3-phenyl(thio)uracil or 3-phenyldithiouracil of the formula I where  $R^1$  = amino.

2. (Original) The process according to claim 1, wherein the reaction is effected in the presence of a base which is selected from alkali metal and alkaline earth metal carbonates, alkali metal and alkaline earth metal alkoxides, alkali metal and alkaline earth metal hydrides and tertiary amines.

3. (Previously presented) The process according to claim 1, wherein the reaction is effected in a solvent comprising at least one aprotic polar solvent, and the aprotic polar solvent has a water content of from 0 to 0.5% by weight, based on the total amount of compound II, compound III and solvent.

4. (Original) The process according to claim 3, wherein the solvent comprises at least 50% by volume of an aprotic polar solvent selected from carboxamides, carboxylic esters, carbonates, nitriles and sulfoxides.

5. (Original) The process according to claim 4, wherein the solvent comprises at least 80% by weight of an aprotic polar solvent.

6. (Previously presented) The process according to claim 1, wherein from 0.9 to 1.3 mol of the enamine of the formula III are used per mole of the compound II.

7. (Previously presented) The process according to claim 1, wherein a 3-phenyl(thio)uracil or a 3-phenyldithiouracil, where  $R^1$  is hydrogen, is prepared and this compound I is subsequently

(A) reacted with an aminating agent of the formula IV



IV

where  $L^1$  is a nucleophilically displaceable leaving group to obtain a compound of the formula I where

$R^1$  is amino; and

the variables  $R^2$ ,  $R^3$ ,  $X^1$ ,  $X^2$ ,  $X^3$ , Ar and A are each as defined above;

or

(B) reacted with an alkylating agent of the formula V



where

$R^{1b}$  is  $C_1-C_6$ -alkyl,  $C_1-C_6$ -haloalkyl,  $C_3-C_7$ -cycloalkyl,  $C_2-C_6$ -alkenyl,  $C_2-C_6$ -haloalkenyl,  $C_3-C_6$ -alkynyl or  $C_3-C_6$ -haloalkynyl; and

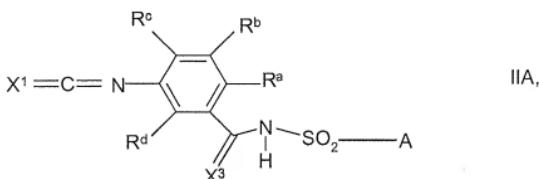
$L^2$  is a nucleophilically displaceable leaving group;

to obtain a compound of the general formula I where

$R^1$  is as defined for  $R^{1b}$ ; and

the variables  $R^2$ ,  $R^3$ ,  $X^1$ ,  $X^2$ ,  $X^3$ , Ar and A are each as defined above.

8. (Previously presented) The process according to claim 1, wherein the phenyl iso(thio)cyanate of the formula II is described by the formula IIA



where

$X^1$ ,  $X^3$  and A are each as defined above and

$R^a$ ,  $R^b$ ,  $R^c$  and  $R^d$  are each independently

hydrogen, halogen, cyano,  $C_1-C_4$ -alkyl or  $C_1-C_4$ -haloalkyl.

9. (Original) The process according to claim 8, wherein, in formula IIA,

R<sup>a</sup> is halogen, cyano or trifluoromethyl;

R<sup>c</sup> is hydrogen or halogen; and

R<sup>b</sup> and R<sup>d</sup> are each hydrogen.

10. (Canceled)

11. (Currently Amended) The process according to claim [[10]]1, wherein R<sup>5</sup> and R<sup>6</sup> are each defined as follows:

R<sup>5</sup> and R<sup>6</sup> are each independently

hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl which may if appropriate carry a substituent selected from the group consisting of halogen, cyano, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-alkoxycarbonyl, C<sub>1</sub>-C<sub>4</sub>-alkylthio, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl, furyl, thienyl, 1,3-dioxolanyl and phenyl

which may itself optionally be substituted by halogen or C<sub>1</sub>-C<sub>4</sub>-alkoxy; C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-alkynyl, C<sub>3</sub>-C<sub>8</sub>-cycloalkyl or phenyl

which may if appropriate carry 1 or 2 substituents selected from the group consisting of halogen, C<sub>1</sub>-C<sub>4</sub>-alkyl, C<sub>1</sub>-C<sub>4</sub>-fluoroalkyl, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-alkoxycarbonyl, nitro and C<sub>1</sub>-C<sub>3</sub>-dialkylamino;

naphthyl or pyridyl; or

R<sup>5</sup> and R<sup>6</sup> together form a five-, six- or seven-membered saturated or unsaturated nitrogen heterocycle which may contain, as a ring member, one further heteroatom selected from N, O and an NR<sup>7</sup> group

where R<sup>7</sup> is hydrogen, C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>3</sub>-C<sub>6</sub>-alkenyl or C<sub>3</sub>-C<sub>6</sub>-alkynyl, and/or may be substituted by one, two or three substituents selected from C<sub>1</sub>-C<sub>4</sub>-alkyl and C<sub>1</sub>-C<sub>4</sub>-haloalkyl.

12. (Previously presented) The process according to claim 1, wherein X<sup>1</sup>, X<sup>2</sup> and X<sup>3</sup> are each oxygen.

13. (Previously presented) The process according to claim 1, wherein R<sup>1</sup> is hydrogen, amino or C<sub>1</sub>-C<sub>4</sub>-alkyl.

14. (Previously presented) The process according to claim 1, wherein R<sup>2</sup> is hydrogen, C<sub>1</sub>-C<sub>4</sub>-alkyl or C<sub>1</sub>-C<sub>4</sub>-haloalkyl.

15. (Previously presented) The process according to claim 1, wherein R<sup>3</sup> is hydrogen.

16. (Canceled)

17. (Previously presented) A process of claim 1, wherein R<sup>1</sup> is hydrogen, further comprising reacting said compound of Formula I wherein R1 is hydrogen with an alkylating agent of Formula V



wherein L<sup>2</sup> is a nucleophilically displaceable leaving group and

wherein R<sup>1b</sup> is C<sub>1</sub>-C<sub>6</sub>-alkyl, C<sub>1</sub>-C<sub>6</sub>-haloalkyl, C<sub>3</sub>-C<sub>7</sub>-cycloalkyl, C<sub>2</sub>-C<sub>6</sub>-alkenyl, C<sub>2</sub>-C<sub>6</sub>-haloalkenyl, C<sub>3</sub>-C<sub>6</sub>-alkynyl or C<sub>3</sub>-C<sub>6</sub>-haloalkynyl.